87. (Amended) The composition of claim 85, wherein the binding agent is a monoclonal antibody.

Remarks

Claims 30, 61-63, 66-67, 69, 71-97 are currently pending. Claims 31 and 70 have been cancelled. Each presently maintained rejection is separately addressed below. The number before each response below refers to the number of the relevant paragraph of the Office Action.

4. The abstract of the disclosure has been amended to more adequately summarize the invention. Support for this amendment can be found in claim 30.

5. An executed declaration and power of attorney is enclosed. Please note the enclosed revocation/creation of power of attorney and change of address.

6. Claims 74, 83 and 92 are supported at pages 26, 28, 56 and 72 and in figure 19 and claim 48 in Serial No. 09/094,598, filed 15 June 1998, from which the present application claims priority. Appropriate amendment of the present specification has been made at page 28, line 17.

7. Claim 31 has been canceled, as suggested by the Examiner.

9. Applicants respectfully submit that in the context of claims 67 and 70 one of ordinary skill would recognize Ab3 and Ab3' to be antibodies. AB3 and AB3' are unfortunate typographical errors. Claim 67 has been amended to correct this mistake. Claim 70 has been canceled. Claim 69 has been amended to specify that the antibody is administered to a patient and that the beneficial effect is to the patient. Claim 67 has been amended to specify that the binding agent is used for the purpose of inducing Ab3 and Ab3'. Claim 87 has been amended to specify that the binding agent of claim 85 is a monoclonal antibody.

12. The specification has been amended to support claims 74, 83 and 92.

13. See response to paragraph 6. The record of deposit of hybridoma cell lines B43.13 and AR20.5 is enclosed. As attorney of record having authority and control over the conditions of deposit, I hereby certify that all restrictions upon public access to the deposits will be irrevocably removed upon the grant of patent on this application and that the deposit will be replaced if viable samples cannot be dispensed from the depository as required. The specification has been amended to recite the date of deposit and the name and address of the depository. See page 36.

14. Claims 30, 61, 62, 63, 71, 73, 74, 77, 78, 85, 86, 87, 91, 92, 94, 95 and 97 are novel over Morgan et al. Claim 31 has been canceled. All aspects of Morgan et al require the formation of an insoluble immune complex, unlike the claimed invention. Also, with respect to claim 30 and all claims dependent thereon, claim 30 has been amended to specify that the binding agent is foreign. Morgan et al lacks this element.

15. Claims 30, 67, 69, 71, and 73-76 are novel over Kowprowski et al. Kowprowski et al. deals solely with administration of anti-idiotype antibodies, unlike the claimed invention.

16. Claims 61 and 62, as amended, are novel over Klaus. Claim 61 has been amended to provide that the binding agent is foreign. Klaus lacks this element. Support for this amendment is found in the fact that every example in the specification uses a foreign (mouse antibody) binding agent in a human.

17. Claims 66, 67,as amended, and claim 69 are novel over Raso et al. Claims 66 and 67 have been amended to specify that the induction of Ab3 and Ab3' is in a patient, wherein the patient obtains a beneficial effect. Raso et al provides antibodies that bind cocaine. Cocaine is a hapten representing a single epitope, As such, Ab3' antibodies raised against cocaine-KLH would not be expected to provide a beneficial effect.

18. Claim 69, as amended, is novel over Madiyalakan et al. Claim 69 has been amended to require that the antibody administered be non-radiolabeled and that the anti-anti-idiotype

antibodies include Ab3' antibodies. Support for this amendment is found in the specification at page 23, lines 22-23. Neither element is present in Madiyalakan et al.

19. Claim 61 is novel over Zanetti. Claim 61 requires that the antigen bound to the binding agent be modified. Zanetti does not provide this element.

20. Claim 70 has been canceled.

23. Claims 61-63, 77, 78, 79, 82-88 and 91-96, as amended, are patentable over Madiyalakan et al in view of Klaus. These claims have been amended to require that the binding agent administered is foreign. Klaus lacks this element. Support for this amendment is found in the fact that every example in the specification uses a foreign (mouse antibody) binding agent in a human.

24. Claims 61, 63, 77, 78, 82-87, 91-94 and 96 are patentable over Faberberg et al, or Froding et al, or Tsang et al, or Chu et al in view of Klaus. All of the secondary references relate to passive immunity. The claims all require that the antibody administered be bound to an antigen. Such a combination cannot provide passive immunity. As to Klaus, see response to paragraph 23.

25. Claims 66, 67, 69 and 70 are patentable over Faberberg et al, or Frodin et al, Tsang et al or Chu et al in view of Klaus and further in view of Tassi et al for the reasons set forth in the response to paragraph 24.

26. A terminal disclaimer will be provided when the claims are otherwise found to be allowable.

27. A terminal disclaimer will be provided when the claims are otherwise found to be allowable.

For the reasons discussed above, Applicants respectfully submit that claims are now ready for allowance. If the Examiner believes that any discussion of this reply would be helpful, the Examiner is invited to call the undersigned attorney by telephone at 781-938-1805.

Respectfully submitted,

Date: 6/10/02

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EXHIBIT A
AMENDED CLAIMS

30. (Amended) A method of stimulating the production of antibodies that bind to an epitope on a soluble antigen comprising:

administering to a host a foreign binding agent that binds to the soluble antigen;

forming a complex between the foreign binding agent [and the soluble antigen], wherein the formation of the complex exposes an epitope that is unexposed when the foreign binding agent is not complexed to the antigen;

and allowing the host to generate [an antibody] antibodies that [binds] bind to the exposed epitope.

61. (Amended) A composition for altering immunogenicity comprising a modified antigen[, said modified antigen comprising an antigen] bound to a foreign binding agent.

66. (Amended) A method of altering immunogenicity in a patient comprising administering to the patient a composition comprising a binding agent that induces the production of AB3 and AB3'; and

permitting [said] the binding agent to specifically bind to a soluble antigen in the patient, wherein the patient obtains a beneficial effect.

67. (Amended) A method of using a binding agent to induce AB3 and AB3' in a patient comprising administering to the patient a composition comprising a binding agent and allowing [said] the binding agent to induce the production of AB3 and AB3', wherein the patient obtains a beneficial effect.

69. (Amended) A method of stimulating the production of antibodies which bind to [an epitope on] a soluble antigen in a patient comprising:

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administering to the patient a non-radiolabeled monoclonal antibody that specifically binds to [a] the soluble antigen in an amount sufficient to stimulate the production of anti-anti-[idiotypic] idiotype antibodies that immunoreact with [the] an antigen-antibody complex formed between the monoclonal antibody and the antigen, wherein the production of anti-anti-idiotype antibodies provides a beneficial effect to the patient.

87. (Amended) The composition of claim 85, wherein the [antibody] binding agent is a monoclonal antibody.

EXHIBIT B

PENDING CLAIMS

30, 61-63, 66-67, and 69, 71-97

30. (Amended) A method of stimulating the production of antibodies that bind to an epitope on a soluble antigen comprising:

administering to a host a foreign binding agent that binds to the soluble antigen;

forming a complex between the foreign binding agent, wherein the formation of the complex exposes an epitope that is unexposed when the foreign binding agent is not complexed to the antigen;

and allowing the host to generate antibodies that bind to the exposed epitope.

61. (Amended) A composition for altering immunogenicity comprising a modified antigen bound to a foreign binding agent.

62. The composition of claim 61 wherein the antigen is soluble.

63. The composition of claim 61 wherein the antigen is multi-epitopic.

64. The composition for altering immunogenicity comprising a binding agent that stimulates the production of antigen-reactive antibodies wherein the production of said antibodies provides a beneficial therapeutic effect.

65. The method of claim 64 wherein the antigen-reactive antibodies are AB3 and AB3'.

66. (Amended) A method of altering immunogenicity in a patient comprising administering to the patient a composition comprising a binding agent that induces the production of AB3 and AB3'; and

permitting the binding agent to specifically bind to a soluble antigen in the patient, wherein the patient obtains a beneficial effect.

67. (Amended) A method of using a binding agent to induce AB3 and AB3' in a patient comprising administering to the patient a composition comprising a binding agent and allowing the binding agent to induce the production of AB3 and AB3', wherein the patient obtains a beneficial effect.

69. (Amended) A method of stimulating the production of antibodies which bind to a soluble antigen in a patient comprising:

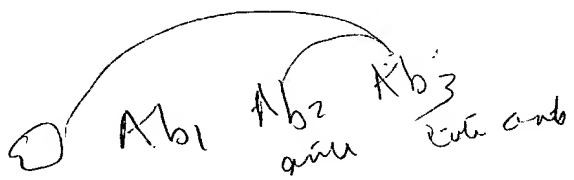
administering to the patient a non-radiolabeled monoclonal antibody that specifically binds to the soluble antigen in an amount sufficient to stimulate the production of anti-anti-idiotype antibodies that immunoreact with an antigen-antibody complex formed between the monoclonal antibody and the antigen, wherein the production of anti-anti-idiotype antibodies provides a beneficial effect to the patient.

71. The method of claim 30, wherein the binding agent is selected from the group consisting of one member of an immunologic pair; an antibody; a monoclonal antibody; an antibody fragment; a single chain antibody; a humanized antibody or fragment; a chimera antibody or fragment; a peptide; and a protein.

72. The method of claim 30, wherein the binding agent is photoactivated.

73. The method of claim 30, wherein the soluble antigen is associated with a human disease or condition.

74. The method of claim 73, wherein the human disease or condition is selected from the group consisting of cancer; tumor; drugs of abuse; multiple sclerosis; allergy; human immunodeficiency virus; bacterial infection; autoimmune diseases; human viruses; and asthma.



75. The method of claim 74, wherein the cancer is selected from the group consisting of breast, ovarian, prostate, and gastro-intestinal cancers.

76. The method of claim 30, wherein the host is a human.

77. The composition of claim 61, wherein the binding agent is selected from the group consisting of one member of an immunologic pair; an antibody; a monoclonal antibody; an antibody fragment; a single chain antibody; a humanized antibody or fragment; a chimera antibody or fragment; a peptide; and a protein.

78. The composition of claim 77, wherein the antibody is a monoclonal antibody.

79. The composition of claim 78, wherein the monoclonal antibody is B43.13.

80. The composition of claim 78, wherein the monoclonal antibody is AR20.5.

81. The composition of claim 61, wherein the binding agent is photoactivated.

82. The composition of claim 61, wherein the antigen is associated with a human disease or condition.

83. The composition of claim 82, wherein the human disease or condition is selected from the group consisting of cancer; tumor; drugs of abuse; multiple sclerosis; allergy; human immunodeficiency virus; bacterial infection; autoimmune diseases; human viruses; and asthma.

84. The composition of claim 83, wherein the cancer is selected from the group consisting of breast, ovarian, prostate, and gastro-intestinal cancers.

85. A composition for altering immunogenicity comprising an antigen and a binding agent that specifically binds to the antigen, wherein the binding agent and the antigen form a complex, and wherein administration of the composition to a host alters the host immune response against the antigen.

86. The composition of claim 85, wherein the binding agent is selected from the group consisting of one member of an immunologic pair; an antibody; a monoclonal antibody; an antibody fragment; a single chain antibody; a humanized antibody or fragment; a chimera antibody or fragment; a peptide; and a protein.

87. (Amended) The composition of claim 85, wherein the binding agent is a monoclonal antibody.

88. The composition of claim 87, wherein the monoclonal antibody is B43.13.

89. The composition of claim 87, wherein the monoclonal antibody is AR20.5.

90. The composition of claim 85, wherein the binding agent is photoactivated.

91. The composition of claim 85, wherein the antigen is associated with a human disease or condition.

92. The composition of claim 91, wherein the human disease or condition is selected from the group consisting of cancer; tumor; drugs of abuse; multiple sclerosis; allergy; human immunodeficiency virus; bacterial infection; autoimmune diseases; human viruses; and asthma.

93. The composition of claim 92, wherein the cancer is selected from the group consisting of breast, ovarian, prostate, and gastro-intestinal cancers.

94. The composition of claim 85, wherein the antigen is a multi-epitopic antigen.

95. The composition of claim 85, wherein the antigen is a soluble antigen.

96. The composition of claim 85, wherein the host is a human.

97. The composition of claim 85, wherein forming a complex between the binding agent and the antigen comprises exposing a previously inaccessible epitope on the antigen.